

Fate Report for Case # P-18-0169

Fate

Summary Statement

Fate P-18-0169

Summary FATE:

Statement: MW = 10,000 with $0.5\% < 500$ and $0.5\% < 1000$

Solid

S =

Disp.

VP < $1.0\text{E-}6$ torr at 25 °C (E)

BP > 400 °C (E)

H <

$1.00\text{E-}8$ (E)

POTW removal (%) = 90 via sorption

Time for complete

ultimate aerobic biodeg > mo

Sorption to soils/sediments =

v.strong

PBT Potential: P3B1

*CEB FATE: Migration to ground water =

negl

PMN Material:

Overall wastewater treatment removal is 90%

via sorption.

Sorption to sludge is strong based on data for high molecular weight polymers.

Air Stripping (Volatilization to air) is

negligible based on data for high molecular weight polymers.

Removal

by biodegradation in wastewater treatment is negligible based on data for high molecular weight polymers.

The aerobic aquatic biodegradation

half-life is greater than months based on data for high molecular weight polymers.

The anaerobic aquatic biodegradation half-life is greater

than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and

sediment is very strong based on data for high molecular weight polymers.

Migration to groundwater is negligible based on data for high molecular weight polymers.

PMN Material:

High Persistence (P3) is

based on the aerobic and anaerobic biodegradation half-lives.

Low

Bioaccumulation potential (B1) is based on data for high molecular weight polymers and low water solubility, which inhibits bioavailability and biodegradation.

Bioconcentration/Bioaccumulation factor to be put into E-Fast: N/A.

CBI: [REDACTED]

Fate Lee, Mari

Assessor:

SMILES: [REDACTED]

Physical Properties

Property	Measured/Calculated Value	EPI
Molecular Form:	[REDACTED]	
Molecular Wt.:	10000.0	
% < 500:	0.5	
% < 1000:	0.5	

Property	Measured Value	Method	Estimated Value	Method	EPI
Melting Point:					
Boiling Point:					
BP					
Pressure:					
Vapor Pressure:			<0.000001		
Water Solubility:			Dispersible		
Log P:					

Property	Measured Value	Method	Estimated Value	Method	EPI
Log Kow: Log Koc: Log BCF: Henry's Law:					
pH: pH Comment:					

Fate Analysis

Hydrolysis (t1/2, da):	Volatilization (t1/2) - River (hr):	Volatilization (t1/2) - Lake (da):
Atm Ox Potential (t1/2)OH (hr):	Atm Ox Potential (t1/2)O3 (hr):	Atm Ox Potential (t1/2) Total (hr):
MITI Linear:	MITI NonLinear:	
Biodeg Linear:	Biodeg NonLinear:	
Biodeg Survey ult:	Biodeg Survey Prim:	
STP (% removal) Total:	STP (% removal) Biodeg:	
STP (% removal) Ads:	STP (% removal) Air:	

Rationales

Removal in Wastewater Treatment: Atmospheric Oxidation: Hydrolysis: Photolysis: Aerobic Biodegradation: Anaerobic Biodegradation:
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**Sorption
to Soil and
Sediment:**
**Migration to
Groundwater:**
Persistence - Air:
**Persistence
- Water:**
**Volatilization
from Water:**
Soil:
Sediment:
Other:
Standard:
Bioaccumulation:

PBT Ratings

Persistence	Bioaccumulation	Toxicity	PBT Comments
3	1		

Exposure-Based Testing

Exposure-Based Testing:

Fate Ratings

Removal in WWT/POTW (Overall):

Removal in 90 WWT/POTW (Overall):

Condition	Rating Values	Rating Description				Comment
		1	2	3	4	
WWT/POTW Sorption:	3	Low	Moderate	Strong	V. Strong	
WWT/POTW Stripping:	4	Extensive	Moderate	Low	Negligible	
Biodegradation Removal:	4	Unknown	High	Moderate	Negligible	
		Unknown	Complete	Partial	—	

Condition	Rating Values	Rating Description				Comment
		1	2	3	4	
Biodegradation Destruction:						
Aerobic	4	<=	Weeks	Months	>	
Biodeg Ult:		Days			Months	
Aerobic Biodeg Prim:		<= Days	Weeks	Months	>	
Anaerobic Biodeg Ult:	4	<= Days	Weeks	Months	>	
Anaerobic Biodeg Prim:		<= Days	Weeks	Months	>	
Hydrolysis (t1/2 at pH 7,25C) A:		<=	Hours	Days	>=	
Hydrolysis (t1/2 at pH 7,25C) B:		Minutes			Months	
Sorption to Soils/Sediments:	1	V. Strong	Strong	Moderate	Low	
Migration to Ground Water:	1	Negligible	Slow	Moderate	Rapid	
Photolysis A, Direct:		Negligible	Slow	Moderate	Rapid	
Photolysis B, Indirect:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox A, OH:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox B, O3:		Negligible	Slow	Moderate	Rapid	

Bio**Comments:**

Bio Comments:

Fate**Comments:**

Fate Comments:

**Comments/Telephone
Log**

Artifact	Update/Upload Time
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